ETHYL CORPORATION

CORPORATE ENVIRONMENTAL AFFAIRS

December 6, 1985

PLEASE ADDRESS REPLY
TO: 451 FLORIDA BLVD
BATON ROUGE, LA. 70801

Mr. Oscar Voyea
Oakland County Health Division
Environmental Health Service
1200 N Telegraph Road
Pontiac, MI 48053

Dear Mr. Voyea:

As activities at the Ferndale Laboratory were winding down, Ethyl's Corporate Environmental Affairs Group conducted an investigation to determine the extent of possible chemical contamination under the Ferndale Laboratory property. Our conclusions were that there was no threat to groundwater and no remedial action required, but that future excavations should be made with the knowledge that the possibility of uncovering some contamination or an intact container would always remain.

Laboratory and pilot plant quantities of glassware and residues were buried in various areas from 1939 to the early 1980's. The original disposal area, used from 1939 to 1955, was under what is now the northwest corner of the main parking lot and/or immediately north of the lot. This was a wooded area at that time, and many small shallow holes were dug manually wherever convenient between the trees. We do not know of any records, and there are no markers.

We have been assured by former employees that no tetraethyl lead was ever buried anywhere on the property.

The next disposal site was north of the plastic test panel rack. This area was used from about 1948 to 1962. Reactive sodium compounds were put in metal pans, reacted with water, and the residues put in manually dug holes. We do not know of other chemicals which might have been buried there and did not search the area.

Our survey efforts were concentrated on the eleven mapped pits dug since 1963 in a cluster north of the High-Pressure Lab. The practice here was to dig a fairly large pit and to periodically cover the debris with sand until the pit was very nearly full, mostly with sand. Efforts were made to break or puncture all containers before disposal.

A portable powered auger which could dig a four-inch hole eight feet deep was rented to dig into the pits on April 25, 1984. Twenty holes were augered into these pits; all pits were checked, and samples were taken of the worst material. A sample from the most recent pit contained liquid organics, but

the auger had obviously broken a glass container. A hole two or three feet away was dry and clean. The chemical contamination found in the pits was much too little and too scattered to warrant removal and off-site disposal of the sand and dirt filling the pits.

Six monitoring wells were installed surrounding this most recent disposal area in 1983. The wells were drilled through a 22 to 25-foot layer of sea sand and set at the top of a thick layer of white clay. The log of a water well drilled on the property in 1941 showed the white clay extended from 23 feet to 150 feet, and mixed clay and shale extended to 561 feet. No usable water was found. Well construction details and the August, 1983 sampling results are attached. The analyses show that there is no groundwater contamination.

The attached map of this burial ground and the memories of some senior employees indicated that two small aluminum borohydride cylinders had been buried there. This chemical is very reactive with either air or water, and we decided to recover them to prevent any future problems. The two cylinders were dug up and deactivated on May 15, 1984 with Ferndale Fire Chief Easterwood and Inspector LeGault witnessing much of the operation. The larger cylinder was only four inches in diameter by twenty-three inches long.

The Ferndale Laboratory was a motor fuel test facility, and there were many buried fuel storage tanks on the property ranging from 500 to 10,000 gallons. Some 73 of these tanks were dug up in March, 1985. There are three facility heating oil tanks still in place. No indication was found of any of the tanks ever leaking. The attached analysis from the well installed in the main tank area to measure the groundwater level indicates no contamination.

In summary, we have dug up the only materials that we learned of that seemed hazardous, we have dug into all sites used in the last twenty years without finding anything alarming, and there is not any groundwater problem. At this point, we do not know of any conditions that need to be corrected, but laboratory chemicals were buried on the property, and future excavations should be made with that in mind.

Sincerely,

C. E. Colvin

CEC:imc
Attachments
cc: W. E. Adams
D. C. Bach
N. E. Garland
D. E. Park
G. L. Ter Haar